

AMENDMENTS TO THE CLAIMS

This listing of claims will replace all prior versions, and listings, of claims in this application:

Claims 1 - 12. (Cancelled)

13. (Currently Amended) A method for managing a processing system including one or more computers, the method comprising:

- a) running a factory automation lifecycle including one or more framework software components on by means of the one or more computers; and
- b) running one or more application software components to provide one or more computer implemented instructions for managing the system, wherein the one or more framework components are adapted for managing the application components[[]], wherein said one or more framework software components include a visual workflow component configured to execute at least one manufacturing process and at least one business process.
- ~~e) determining whether the one or more instructions need to be modified;~~
- ~~d) communicating the one or more instructions to the system, if the instructions do not need to be modified;~~
- ~~e) modifying the instructions if they need to be modified, by means of the one or more framework components thereby forming modified instructions; and~~
- ~~f) communicating the modified instructions to the system~~

14. (Original) The method of claim 13 additionally comprising managing the processing system by executing the one or more instructions in the system.

15. (Currently amended) The method of claim 13 wherein running one or more of the framework components comprises running one or more components selected from the group consisting of a security component, a GUI console component, a performance and license

management component, a saga management component, a context resolution component, a configuration management component, a calendar component, ~~a visual workflow component~~, a resource coordination component, an event monitor component, a bill of resources component and a data manager component.

16. (Original) The method of claim 13 wherein running one or more application components comprises running one or more components selected from the group consisting of a quality management component, a tool integration component, an equipment management component, a recipe management component, a dispatching and scheduling component, a material handling component, a work in progress component and a legacy system interface component.

17. (Currently amended) The method of claim ~~70~~ 13 wherein communicating comprises communicating using ~~by means of~~ a tool integration component.

18. (Currently amended) The method of claim ~~70~~ 17 wherein communicating comprises communicating using ~~by means of~~:

- a) a tool interface program; and
- b) a tool integration component adapter.

19. (Currently amended) The method of claim ~~70~~ 17 wherein the one or more computer implemented instructions are visual framework component instructions.

20. (Currently amended) The method of claim 13, additionally comprising forming one or more framework components using ~~by means of~~ one or more software building blocks selected from the group consisting of a server construction building block, a persistence building block, a common GUI controls building block, a publish and subscribe messaging building block, a dynamic API discovery building block, an associations building block, a history building block, a generic service executor building block, a classifications building block, a customer defined attributes building block, a state models building block, a namespace building block, a schedule/datebook building block, a templates building block, a versioned objects building block and a navigation building block.

21. (Currently amended) The method of claim 13 wherein running one or more framework components additionally comprises communicating a data structure of the one or more framework ~~component~~ components to ~~a data structure~~ one of the one or more components selected from the group consisting of framework components and application components.

22. (Currently amended) The method of claim 70 ~~13~~, wherein modifying the instructions comprises inputting data.

23. (Original) The method of claim 13 wherein managing a processing system comprises managing a system for processing an integrated circuit structure.

24. (Original) The method of claim 23 wherein the system comprises one or more wafer fabrication tools.

Claims 25 - 27. (Cancelled)

28. (Currently Amended) A method for processing a product, the method comprising:

- a) determining specifications for processing the product; and
- b) managing the processing ~~on by means of~~ a distributed factory system framework including: (1) a factory automated lifecycle having one or more framework components, wherein said one or more framework software components include a visual workflow component configured to execute at least one manufacturing process and at least one business process, and (2) one or more application components wherein the framework components are adapted for managing the application components.

29. (Original) The method of claim 28 wherein managing additionally comprises:

- a) determining whether the distributed factory system framework needs to be modified in order to meet the specifications; and
- b) modifying one or more of the application components if the distributed factory system framework needs to be modified.

30. (Original) The method of claim 29 wherein modifying comprises inputting data.

31. (Currently Amended) The method of claim 28 wherein managing additionally comprises forming one or more framework components using ~~by means of~~ one or more software building blocks.

32. (Currently amended) The method of claim 28 wherein managing additionally comprises:

- a) forming one or more computer implemented instructions for managing, using ~~by means of~~ the one or more application components;
- b) communicating the one or more instructions to equipment for processing the product; and
- c) executing the one or more instructions on the equipment.

33. (Currently amended) The method of claim 32 wherein communicating comprises communicating using ~~by means of~~ a tool integration component, wherein the tool integration component comprises: (1) a tool integration component adapter and (2) a tool interface program.

34. (Original) The method of claim 28 wherein processing a product comprises processing an integrated circuit structure.

Claims 35 - 47. (Cancelled)

48. (Currently amended) An apparatus for processing a product, the apparatus comprising:

- a) product processing equipment; and
- ~~b) at least one central processing unit for electronic data processing;~~
- ~~c) a link for operably linking the central processing unit to the product processing equipment;~~
- ~~d) a memory for storing digitally coded data structures, wherein the memory is operably linked to the at least one central processing unit; and~~

- e) b) a distributed factory system framework for managing the product processing equipment, the distributed factory system framework comprising: (1) a digitally coded first data structure comprising a factory automation lifecycle including one or more digitally coded framework components, wherein said one or more digitally coded framework components include a visual workflow component configured to execute at least one manufacturing process and at least one business process, (2) a digitally coded second data structure comprising application components adapted for communicating digitally coded instructions to the processing equipment, wherein the first data structure is adapted for managing the second data structure and (3) a link for communicating the digitally coded instructions to the processing equipment.

49. (Original) The apparatus of claim 48 comprising an apparatus for processing an integrated circuit structure.

50. (Currently amended) A distributed factory system framework for managing a processing system, the distributed factory system framework comprising:

- a) at least one computer readable medium, readable by the processing system;
- a) b) a digitally coded first data structure, provided on the at least one computer readable medium, comprising one or more digitally coded framework components, wherein said one or more digitally coded framework components include a visual workflow component configured to execute at least one manufacturing process and at least one business process;
- b) c) a digitally coded second data structure, provided on the at least one computer readable medium, comprising application components adapted for communicating digitally coded instructions to the processing system, wherein the first data structure is adapted for managing the second data structure; and
- e) d) a link for communicating the digitally coded instructions to the processing system.

51. (Currently amended) The distributed factory system framework of claim 50 wherein the framework components comprise one or more components selected from the group consisting of a security component, a GUI console component, a performance and license management component, a saga management component, a context resolution component, a configuration management component, a calendar component, ~~a visual workflow component~~, a resource coordination component, an event monitor component, a bill of resources component and a data manager component.

52. (Original) The distributed factory system framework of claim 50 wherein the application components comprise one or more components selected from the group consisting of a quality management component, a tool integration component, an equipment management component, a recipe management component, a dispatching and scheduling component, a material handling component, a work in progress component and a legacy system interface component.

53. (Currently amended) The distributed factory system framework of claim 50 wherein the link comprises a third ~~fourth~~ data structure, provided on the at least one computer readable medium, including a tool integration component.

54. (Currently amended) The distributed factory system framework of claim 53 wherein the third ~~fourth~~ data structure comprises:

- a) a tool interface program fourth ~~fifth~~ data structure, provided on the at least one computer readable medium; and
- b) a tool integration component adapter fifth ~~sixth~~ data structure, provided on the at least one computer readable medium.

55. (Original) The distributed factory system framework of claim 50, additionally comprising one or more software building blocks selected from the group consisting of a server construction building block, a persistence building block, a common GUI controls building block, a publish and subscribe messaging building block, a dynamic API discovery building block, an associations building block, a history building block, a generic service executor building block, a classifications building block, a customer defined attributes building block, a state models building

block, a namespace building block, a schedule/datebook building block, a templates building block, a versioned objects building block and a navigation building block.

Claims 56 - 65. (Cancelled)

66. (Currently amended) A data storage device comprising:

- a) a digitally coded first data structure comprising a factory automation lifecycle including one or more digitally coded framework components, wherein said one or more digitally coded framework software components include a visual workflow component configured to execute at least one manufacturing process and at least one business process; and
- b) a digitally coded second data structure comprising application components, wherein the first data structure is adapted for modifying the second data structure.

67. (Currently amended) The device of claim 66 wherein the framework components comprise one or more components selected from the group consisting of a security component, a GUI console component, a performance and license management component, a saga management component, a context resolution component, a configuration management component, a calendar component, ~~a visual workflow component~~, a resource coordination component, an event monitor component, a bill of resources component and a data manager component.

68. (Original) The device of claim 66 wherein the application components comprise one or more components selected from the group consisting of a quality management component, a tool integration component, an equipment management component, a recipe management component, a dispatching and scheduling component, a material handling component, a work in progress component and a legacy system interface component.

69. (Original) The device of claim 66 additionally comprising a digitally coded third data structure including one or more software building blocks selected from the group consisting of a server construction building block, a persistence building block, a common GUI controls building block, a publish and subscribe messaging building block, a dynamic API discovery building block,

an associations building block, a history building block, a generic service executor building block, a classifications building block, a customer defined attributes building block, a state models building block, a namespace building block, a schedule/datebook building block, a templates building block, a versioned objects building block and a navigation building block.

70. (New) The method of claim 13 additionally comprising:

- a) determining whether the one or more instructions need to be modified;
- b) communicating the one or more instructions to the system, if the instructions do not need to be modified;
- c) modifying the instructions if they need to be modified, using the one or more framework components thereby forming modified instructions; and
- d) communicating the modified instructions to the system.